

P.O. Box 51450 Idaho Falls, Idaho 83405 (208) 523-6600 Fax (208) 523-6021

DE/AFS/SF

April 20, 2007

RECEIVED

APR 2 3 2007

DEPARTMENT OF ENVIRONMENTAL QUALITY

Mr. Jonathan Pettit Air Quality Permitting Analyst State of Idaho Department of Environmental Quality 1410 North Hilton Boise, Idaho 83706

Re: PTCs for Idaho Falls Plant and Teton Plant

Dear Mr. Pettit:

Attached please find the new copies of the Permits to Construct for the following Plants:

- 1. Idaho Falls Plant 019-00031
- 2. Teton Plant P-060523

After talking Bill Rogers on the phone on Thursday, April 19, 2007, I am sending the updated information to you for your review and submittal. Please consider this as my application for both plants. If you have any questions or concerns please call me and I will be glad to assist you.

Thank you for your patience and assistance with this matter.

Sincerely,

Clarence H Davis

Permits & Environmental Administrator

HK Contractors, Inc.

P.O. Box 51450

Idaho Falls, Idaho 83405

(208) 523-6600

Idaho Department of Environmental Quality
Air Quality Division
Stationary Source Program

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

Please be sure to read the instructions on page one prior to completing this application form.

GENERAL INFORMATION

RECEIVED

Company Name:	H K Contractors, Inc.				APR 2 3 2007
Mailing Address:	P.O. Box 51450				NAME OF THE OWNER O
City:	Idaho Falls		State:	Idah	YEAR OF THE PROPERTY OF THE PR
Zip Code:	83405		County:	Bonr	neville
General Nature of Business & Products:	General Contractor -	Utilities, Gravel, & A	sphalt		
Contact Name, Title:	Larry Ritter / Asphalt	General Superintend	lent	W	
Phone:	208-523-6600		Cell:	208-	317-8627
Email:	larryritter@hkcontract	ors.com			
Owner or Responsible Official Name, Title:	Wade Foster / Owner		Clare	ence H	Davis / Permits
Phone:	208-523-6600		208-	523-66	00
Email:	wadefoster@hkcontra	actors.com	clare	enceda	vis@hkcontractors.com
Proposed Initial Plant Location:	Portable Hot Plant				
Nearest City:	City of Teton, Idaho		Estimated	,	
County:	Fremont County, Idah	0	Startup D		4/1/07
Reason for Application:	Permit to construct a Permit to operate an Permit to modify/rev Permit No.: Issue Date:	existing unpermitted		entify the	e permit below)
	Facility ID:	139 Hot Plant			
Check here to indicate	ate you would like to revie	w a draft permit prior t	o final issuan	ce.	
Comments: Requesting Fuel Cha	nge and Replacing 360	Burner with another	used 360 B	urner.	

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

Manufacturer:	Barber Greene		Model:	DA-70X124
Manufacture Date:	1959		Type HMA Plant:	☐ Drum Mix ☐ Batch Mix
Maximum Hourly Asph	nalt Production:	250 (tons/hour)		
Requested Annual Asj	phalt Production:	1,477,036 (tons	/year)	
Burner Fuel Type:		Used Oil, Propar	ne, #2 Fuel Oil (natu	ıral gas, #2 fuel oil, etc)
Maximum Burner Fuel	Usage Rate:	375 🗌 scf/hour	or 🛛 gallons/hour	
Type Air Pollution Con	ntrol Device:	Wet Scrubber (b	aghouse, scrubber, et	c.)
Control Device Manufacturer:	Barber Greene		Model:	CV-70
Stack Parameters:	Stack Height from	m Ground (ft): 25 Diameter (ft): 3.4		chaust Flow Rate (acfm): 44,00 st Gas Temperature (°F): 127
ASPHALT TANK HE	ATER	#2 Fuel Oil	(natural gas, #2 fuel oil	l, etc)
Fuel Type:				2
Fuel Type: Maximum Fuel Usage	Rate:	8 (units/hour)	(units/year) 🛛 ga	2
Fuel Type: Maximum Fuel Usage Type Air Pollution Con	Rate: ntrol Device:	8 (units/hour) None	(units/year) ⊠ ga	allons I ft ³ other:
Fuel Type:				
Fuel Type: Maximum Fuel Usage Type Air Pollution Con	Rate: htrol Device: Stack Height from Stack Inside	8 (units/hour) None	(units/year) ⊠ ga □ HP Stack Ex	allons I ft ³ other:
Fuel Type: Maximum Fuel Usage Type Air Pollution Con Stack Parameters: Is this an NSPS-affect To determine i following:	Rate: ntrol Device: Stack Height from Stack Inside ed facility? If the HMA facility is a	8 (units/hour) None	(units/year) ⊠ ga □ HP Stack Ex Stack Exhaus	Allons
Fuel Type: Maximum Fuel Usage Type Air Pollution Con Stack Parameters: Is this an NSPS-affect To determine i following: Were an aff	Rate: ntrol Device: Stack Height from Stack Inside ed facility? If the HMA facility is a sany of the following	8 (units/hour) None	(units/year) ⊠ ga ☐ HP Stack Exhaus mance Standards (NSi ied after June 11, 1973 deral Regulations, Par	thaust Flow Rate (acfm): 2 st Gas Temperature (°F): 300

Leading, transfer, and storage systems associated with emission control systems
 Modification is defined in 40 CFR 60 14. The Code of Federal Regulations can be accepted.

Modification is defined in 40 CFR 60.14. The Code of Federal Regulations can be accessed from the website http://www.gpoaccess.gov/cfr/.

Has a performance test been conducted in accordance with 40 CFR 60.93 that demonstrates particulate matter emissions are less than or equal to 0.04 gr/dscf (grains per dry standard cubic foot) at the HMA stack?

Yes □ No

If Yes, state the date the test was conducted: 6/11/1987.

Provide a copy of the performance test results with this application if you want DEQ to consider it in determining the frequency of performance testing requirements for your hot-mix asphalt plant.

PERMIT TO CONSTRUCT (PTC) APPLICATION For Hot-Mix Asphalt Plants

FORM AQ-F-P007

ELECTRICAL GENERATOR SET INFORMATION (IF APPLICABLE)

Manufacturer:	N/A		Mo	odel:	N/A			
Maximum Rated Capac		N/A	□ Нр	□kW				
Fuel Type:	ncy.	Gasoline	Diesel	☐ Natura	I Gas	ine		
Maximum Fuel Usage I	Rate:	N/A	gal./hr.	cfh				
Maximum Daily Hrs. of		N/A (hours/da						
Maximum Annual Hrs.	Water the second second	N/A (hours/ye						
Stack Parameters:	Stack Height fr	om Ground (ft): e Diameter (ft):	<u>N/A</u> <u>N/A</u>	Stack Exhaust Flow Rate (acfm): N/A Stack Exhaust Gas Temperature (°F): N/A				
Manufacturer:	N/A		IV	lodel:	N/A			
Maximum Rated Capac	ity:	N/A	□ Нр	☐ kW				
Fuel Type:		Gasoline	☐ Diesel	☐ Natura	l Gas 🔲 Propa	ane		
Maximum Fuel Usage F	Rate:	N/A	gal./hr.	☐ cfh				
Maximum Daily Hrs. of	Operations:	N/A (hours/da	ay)					
Maximum Annual Hrs.	of Operations:	N/A (hours/ye	ear)					
Stack Parameters:		from Ground (ft): de Diameter (ft):	<u>N/A</u> <u>N/A</u>		xhaust Flow Rate (a st Gas Temperature			
⊠ \$1,000 PTC applic	ation fee encl	osed						
Certification of Trutl I hereby certify that base contained in this and any IDAPA 58.01.01.123-124	d on information attached and/or	and belief formed referenced docu	d after reasona ment(s) are tro	able inquiry, the	e statements and in nd complete in acc	formation ordance with		
Responsible Official Signatur	ire		ible Official Title			Date		
Clarence H Davis Print or Type Responsible C								

H-K Contractors, Inc. Teton Facility HMA Plant Potential to Emit and Air Quality Modeling Analysis Report

Prepared for:

H-K Contractors, Inc. P.O. Box 51450 Idaho Falls, ID 83405

Prepared by:



Environmental Consulting Services, LLP
451 Freedom Ave.
Billings, MT 59105
www.enviroconsult.com

April 5, 2007

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1.0 INTRODUCTION

Environmental Consulting Services, LLP (ECS) has been retained by H-K Contractors, Inc. (HKC) to provide assistance with, and to perform, specific air quality (AQ) calculations and modeling services in order to support HKC with modifications to their AQ Permit to include the use of three additional fuel types in the Dryer Drum of the Teton Facility Hot Mix Asphalt (HMA) Plant. ECS has performed, and presents herein, potential to emit (PTE) calculations and any AQ Modeling necessary/required of the proposed changes to the Teton Facility HMA Plant.

2.0 SITE INFORMATION

ECS has been provided with the address of the Teton Facility HMA Plant site by HKC, with the current location of the site as 110 North 2300 East, Teton, ID (see Figure 1). This HMA Plant was issued a Permit to Construct (PTC) from the Idaho Department of Environmental Quality (IDEQ) on December 5, 2006 (AQ Permit #P-060523) and lists the following AQ Permit Emission Limits:

Dryer Drum:

- o PM (Particulate Matter) emissions from the dryer stack shall not exceed 0.04 gr/dscf (grains per dry standard cubic foot) in accordance with 40 CFR 60.92
- o PM₁₀ (Particulate Matter 10 microns in diameter or less) emissions from the dryer stack shall not exceed the emission rate of 9.3 lb/hr (pounds per hour) and/or 18.9 T/yr (tons per year)

This HMA Plant is a 1959 Barber Green, Drum Mix – Parallel Flow, with a Wet Scrubber. The throughput rate of this HMA Plant is at the maximum of 250 T/hr (tons per hour), and currently uses propane for fuel for the Dryer Drum.

3.0 PROPOSED CHANGES

It is the understanding of ECS that HKC wishes to propose that an additional three fuel types be able to be used and permitted for the Dryer Drum of The Teton Facility HMA Plant and that this will be the sole proposed change. The three additional fuel types proposed are: Natural Gas; #2 Fuel Oil; and Used Oil. ECS has therefore approached the PTE and any necessary/required AQ Modeling work tasks with this sole proposed change in mind. As there will be no changes to the Tank Heater or other ancillary systems of the Teton Facility HMA Plant, then ECS sees no need to further quantify PTE or AQ Modeling for these features of this HMA Plant. PTE and any necessary/required AQ Modeling of the Teton Facility HMA Plant will be performed on the Dryer Drum only, and will consist of an assessment of any increase(s) of emissions of this HMA Plant due to the proposed additional fuel types to be used in the Dryer Drum.

Figure 1 - Site Location

Page 1



4.0 PTE CALCULATIONS

ECS has used the following Teton Facility HMA Plant Dryer Drum specific data for PTE calculations as well as AQ Modeling work tasks:

- Barber Green Drum Mix Parallel Flow Dryer Drum
- 250 T/hr throughput maximum capacity
- Four fuel types (proposed) of Propane; Natural Gas; #2 Fuel Oil; and Used Oil
- ♦ Wet Scrubber emission control (rated at a minimum of 70% control efficiency)
- Stack Height of 25 ft (feet) or 7.62 m (meters)
- Stack Diameter of 3.33 ft or 1.02 m
- Exit gas volume of 44,000 acfm (actual cubic feet per minute) or 84.2 ft/s (feet per second) or 25.7 m/s (meters per second)
- ♦ Exit gas temperature of 127 °F or 52.78 °C or 325.93 °K

For PTE calculations ECS will use AP-42 emission factors (Efs) and since there are four types of fuel proposed to be used for the Dryer Drum, then ECS will use the most restrictive (i.e., worst-case scenario) Ef for any/all listed parameters in AP-42 Section 11.1 Hot Mix Asphalt Plants, revised March 2004. For clarity ECS has calculated PTE for both criteria pollutants and toxic air pollutants (TAPs).

Criteria Pollutants PTE:

Criteria pollutants were calculated in three distinct manners, with copies of the spreadsheets included in Appendix A, as well as a comparison of data values spreadsheet. The four criteria pollutant PTE spreadsheets are:

- ♦ Maximum PTE
- ♦ Actual Proposed PTE
- Permit Limits PTE
- PTE Data Values Difference of Actual Proposed Compared to Current Permit Limits

The Maximum PTE calculations are for IDEQ to use to classify the Teton Facility HMA Plant, which according to IDEQ regulations appears to be classified as a "synthetic minor" (SM) source. The Actual Proposed PTE calculations present results for emissions of criteria pollutants according to the proposed changes of adding three fuel types for the Dryer Drum. The Permit Limits PTE calculations present results for emissions of criteria pollutants according to current permit limits for the Dryer Drum. The difference of the calculated emissions of the Actual Proposed PTE and the Permit Limits PTE is shown on the PTE Data Values Difference. The PTE Data Values Difference indicates two (2) criteria pollutants that will increase, with NO_x emissions increasing a calculated 4.4 tons per year (TPY) and SO₂ emissions increasing a calculated 8.3 TPY.

As both of these calculated emission increases are well below the 40 TPY "significant" emission levels in IDAPA 58.01.01 then there does not appear to be any reason for any further study of criteria pollutants resulting from the proposed fuel type additions for the Teton Facility HMA Plant Dryer Drum.

Toxic Air Pollutants PTE:

Toxic Air Pollutants (TAPs) were calculated in three distinct manners, with copies of the spreadsheets included in Appendix A, as well as a comparison of data values spreadsheet. The TAPs PTE spreadsheets are:

- ♦ Maximum PTE
- ♦ Actual Proposed PTE
- ♦ Permit Limits PTE
- ♦ PTE Data Values Difference of Actual Proposed Compared to Current Permit Limits

Again, the Maximum PTE calculations are for IDEQ to use to classify the Teton Facility HMA Plant. The Actual Proposed PTE calculations present results for emissions of TAPs according to the proposed changes of adding three fuel types for the Dryer Drum. The Permit Limits PTE calculations present results for emissions of TAPs according to current permit limits for the Dryer Drum. The difference of the calculated emissions of the Actual Proposed PTE and the Permit Limits PTE is shown on the PTE Data Values Difference. The PTE Data Values Difference indicates that there will be no TAPs increases in emissions that will exceed the screening emission level (EL) set by IDEQ in IDAPA 58.01.01 Sections 585 and 586. Due to this result then no further actions, including AQ Modeling, should be required.

5.0 AQ MODELING

As no "significant" emission levels for criteria pollutants were reached or exceeded, as well as no ELs of TAPs reached or exceeded, then there does not appear to be any reason or requirement to perform AQ Modeling for the proposed changes of adding the three types of fuel for the Dryer Drum at this facility. Should AQ Modeling be deemed to be necessary/required for any air quality pollutant of the Teton Facility HMA Plant Dryer Drum, due to the proposed fuel type changes/additions, then ECS would use the EPA approved SCREEN3 model with the specific stack data for the Teton Facility HMA Plant Dryer Drum, as shown above, and would typically use the rate of one (1) pound per hour (lb/hr) emission rate, which is 0.126 g/s (grams per second), to generate a dispersion coefficient for the Dryer Drum stack. ECS did perform this function (i.e., AQ Modeling) and this dispersion coefficient, which is shown to be $6.600 \, \mu \text{g/m}^3$ (micrograms per cubic meter) per 1 lb/hr of any pollutant emitted from the Dryer Drum stack, can then be used as needed/required to calculate the highest estimated concentration of any pollutant for the Teton Facility HMA Plant Dryer Drum and the proposed changes of adding the three fuel types to the Dryer Drum.

Since there is a linear relationship between emission rate(s) and ambient air quality impact(s), then this relationship can be used to predict the actual ambient air quality impact by multiplying the dispersion coefficient of the Dryer Drum stack (i.e., $6.600 \mu g/m^3$) by the actual emission rates of any air quality pollutants emitted from the Teton Facility HMA Plant Dryer Drum.

6.0 DISSCUSSION OF RESULTS

According to the PTE calculations and the AQ Modeling performed on the Teton Facility HMA Plant, as described within this Report, ECS has concluded that all Criteria Pollutants and the listed TAPs do not exceed any IDEQ ELs and/or trigger any additional modeling and/or assessments.

7.0 LIMITATIONS AND RESTRICTIONS

ECS has prepared this PTE and AQ Modeling Analysis Report specifically for this project, this site, and for HKC and the IDEQ. This document is solely for the use of ECS, HKC, and IDEQ any reliance on this document by a third party without the written consent of both ECS and HKC is prohibited. Should any information contained in this document, or any part of this document, be used by a third party, this shall be at the third party's sole risk.

ENVIRONMENTAL CONSULTING SERVICES, LLP

Kevin K. Walsh

Partner/Consultant

Ken. K. wall

		-	A TOTAL TO		
н	-K	Con	tract	ors.	Inc.

Teton Facility HMA Plant PTE and AQ Modeling Analysis Report

APPENDIX A

POTENTIAL TO EMIT CALCULATIONS

II-K CONTRACTORS, INC.
TETON FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - MAXIMUM - POTENTIAL TO EMIT (based on 8,760 hours per year)
UNCONTROLED EMISSIONS
Based on maximum production rate of 250 tons per hour and four fuel types (Used Oil; #2 Fuel Oil; Propane; & Natural Gas)

Point Source	FM EF Value (lb-ton)	PM (TPY)	PM-10 HF Value (liston)	PM-10 (TPY)	Ef Value (ib/ton)	CO (TPY)	NOx EF Value (lb/ton)	NOx (TPY)	SO2 EF Value (lb/ton)	SO2 (TPY)	VOC EF Value (fb/tm)	VOC (TPY)	Lead EF Value (Brion)	Lead (TPV)
HMA Plant	28.0	30560.0	6.5	7117.5	0.13	142.4	0.055	60.2	0.058	63.5	0.032	35.0	0.00054	0.6

Marine salare reads	EF Value	PM	PM-10 EF Value	PM+10	CO EF Value	co		NOs	SO2 EF Value	SO2		voc	Lead EF Value	Lead
Area Sources	(lb-ton)	(TPY)	(lb/ton)	(TPY)	(lb ton)	(TPY)	(lb ton)	(TPY)	(flation)	(TPY)	(Ibiton)	(TPY)	(lb/mm)	(TPY)
Silo Filling	0.0021	2.3	0.00165	1.1	0.0081	8.9	2 7 10 1 1 No.	0.0	-	0.0	V 1/2	0.0		0.0
Loadout	0.0025	2.7	0.00125	1.4	0.0092	10.1		0.0		0.0		0.0	100	0.0

Note: EF values are from AP-42 and are at "uncontrolled" emissions
Total Particulate Matter (PM) and Total PM-10 EFs from Table 11.1-3
CO, NOs, SO2 EFs from Table 11.1-7
VOC EF from Table 11.1-5
Area Sources EFs from Table 11.1-14 (PM-10 estimated at 50% of PM)

H-K CONTRACTORS, INC.
TETON FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - ACTUAL PROPOSED - POTENTIAL TO EMIT (based on 4,063 hours per year, which is the current permit limit)
CONTROLLED EMISSIONS (West Servibber)
Based on maximum production rate of 250 tons per hour and four fuel types (Used Oil; #2 Fuel Oil; Propane; & Natural Gas)

Point Source	PM EF Value (Brion)	FM (TPY)	PM-10 EF Value (lb/ton)	PM-10 (TPV)	CO EF Value (lb/ton)	CO (TPY)	NOx EF Value (lb/ton)	NOA (TPY)	SO2 EF Value (B/ton)	SO2 (TPY)	VOC EF Value (lb/ton)	VOC.	Lead EF Value (lb(ton)	Lead (TPY)
HMA Plant	0.045	22.9	0.0042	2.1	0.13	19.8	0.055	8.4	0.058	8.8	0.032	4.9	0.00054	0.08
	PM EF Value	PM	PM-10 EF Value	PM-10	co	CO.	NO	luc.	802	l.o.	VOC	unn	Lead	
Area Sources	(Pyton)	CIPVI	(llyron)	CLEV.	(Byton)	CO	EF Value	NON	EF Value	SOI	EF Value	VOC	EF Value	Lead

Note, EF values are from AP-42 and are as "controlled" emissions

Total Particulate Matter (PM) and Total PM-10 EFs from Tables 11.1-3 and 11.1-4 (fabric filter control)

CO, NOs, SO2 EFs from Table 11.1-3 and using a 70% control efficiency (CE) for she Wet Sembler

VOC EF from Table 11.1-3 and using a 70% CE for the Wet Sembler

Area Sources EFs from Table 11.1-14 using a 50% CE for water sprays

0.0014 0.4 0.004 1.0

H-K CONTRACTORS, INC.
TETON FACILITY HOT MIN ASPHALT (HMA) PLANT
EMISSION CALCULATIONS - PERMIT LIMITS - POTENTIAL TO EMIT (based on 4,063 hours per year, which is the current permit limit)
CONTROLLED EMISSIONS (Wel Scrubber)
Based on maximum production rate of 250 tons per hour and currently permitted fuel type of Propane only

Point Source	PM EF Value (thition)	PM (TPV)	PM-10 EF Value (lb/ton)	PM-10 (TPY)	EF Value (lb/ton)	CO (TPY)	NOx EF Value (lb/ton)	NOs (TPY)	SO2 EF Value (lb/ton)	SO2 (TPY)	VOC EF Value (fb/ten)	VOC (TPY)	Lead EF Value (Ryton)	Lead (TPY)
HMA Plant	0.045	22.9	0.0372	18.9	0.13	19.8	0.026	4.0	0.0034	0.5	0.032	4.9	0.00054	0.08
Area Sources	PM EF Value (ib/ton)	PM (TPY)	PM-10 EF Value (lb ton)	PM-10 (TPV)	CO EF Value (lb/ten)	CO (TPY)	NOx EF Value (lb ton)	NOA (TPY)	SO2 EF Value (lb/ton)	SO2	VOC EF Value (flyton)	VOC (FPY)	Lead EF Value (ib ton)	Lead (TPY)
Area Sources.	EF Value		LF Value	PM-10 (TPY)	BF Value	1	EF Value		EF Value		EF Value		EF Value	

Note: EF values are from AP-42 and are as "controlled" emissions; exception is PM-10 FF which is taken directly from current Permit Limit (9.3 lb br). Total Particulate Matter (PM) from Table 11.1-3.

CO, NOs, SO2 FFs from Table 11.1-8 and using a 70% control efficiency (CE) for the Wet Scrubber VOC FF from Table 11.1-8 and using a 70% CE for the Wet Scrubber. Area Sources EFs from Table 11.1-14 using a 50% CE for water sprays.

II-K CONTRACTORS, INC.
TETON FACILITY HOT MIX ASPHALT (HMA) PLANT
PTE DATA VALUES DIFFERENCE OF ACTUAL PROPOSED COMPARED TO CURRENT FERMIT LIMITS
For use in Emission Limit (EL.) comparison for IDEQ and EPA Criteña Pollutants

Point Source	PM	PM-10	CO	NOs	SO2	VOC	Lead
	(TPY)	(TPV)	(ITY)	(TPY)	(TPV)	(TPY)	(TPY)
HMA Plant	0.0	-16.8	0.0	4.4	8.3	0.0	0.0

Area Sources	PM (TPY)	PM-10 (TPY)	CO (TPY)	NOs (TPY)	SO2 (TPY)	VOC	(TPY)
Silo Filling	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Loadout	0.0	0.0	0.0	0.0	0.0	0.0	0.0

H.-K. CONTRACTORS, INC.
TETON PACHATY HOT MIN ASPIRALT (HMA) PLANT
E-MISSION CALCULATIONS: -MAXINIWM - POTENTIAL, TO E-MIT (based on R-740 hours per year)
Hased on maximum production rate of 120 hos per hour and four forthypes (Used_Oit #2 Foet Oit; Prepare; & Natural Gas)
AIR TOAICS AND HAZ-RADOUS AIR POLLUFANTS (HAPs)
Point Source - HMA Plant; Parallel Drum Mix Dryer

	Calculated	The second secon	EF Value	Calculated			
(lleten)	TPY	Politicant	(Darinn)	TPV			
(0.0002)	0.22998						
			0.00000142				
			0.000015				
			0.00017				
			0.00000045	0.00049275			
			0.00054	0.5913			
1000XQ	0.0219	Mangatricsir	0.0065	4171175			
0.50013	0.14235	Mercura	0.0000026	0.002847			
(100616)	0.1792	Nickel	4:0017	1.4233			
0.000048	0.05259	Placedectus	0.0012	1314			
(17,029	3 1755	Silver	11/10/01/045	010003256			
0.0002	0.219	Selemum	B (keep)24	0.002626			
0.0095	10:4928	Thattian	61.00.4416.22	0.002400			
		Zor	0.00014	21 1 971	te-turner.	EF Value	Calculated TPV
		Phintips				Dictions	111
HOOSTY	0.18615		2311.45	9.3 (aux) - 10	2.1.2 x 17710	0.715.13	1.062131.09
0.0000014							3.61355-08
0.0000022							
0.0000031	0.033940				13347439470		
111/00/00/21	64(mm*20034)						
							3.913[-49]
							20805646
							1.42351-76
							1.20451-08
					11.22.2.2.2.2.111.17		
		1000000000	2 4 11 11 11	31315-221-2410			
				-			4.1611/-09
							\$1560-09
							1.64250.00
					FOGUPUDDING OF	3.01200	11000003255
		_	-				
1101	10.95		-				
	0.00021 0.0013 0.0013 0.0003 0	0.00021 0.22998 0.0013 1.4219 0.000030 0.02447 0.000030 0.42795 0.00003 0.42795 0.00013 1.39145 0.00013 1.39145 0.00013 1.39145 0.00013 1.39145 0.00013 0.04395 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.00013 0.14275 0.14275 0.14275	0.0002	0.0002 0.22995	0.00021 0.22995	0.00023	0.0002 0.25995

SO II: 18" values are mnn Ali-42 and are as a continuation of "controlled" environme as "false filled" and "uncontrolled". Due to four types of feel the "works ase" II: was relected and need.

Tables II: 18, 11:1-19, 411-1-12. H-K CONTRACTORS, INC.
TETON PACHLITY HOT MIX ASPHALT (HMA) PLANT
EXISSION CALCULATIONS - ACTUAL PROPOSED - POTENTIAL TO EMIT (based on 4,083 hours per year)
Based on maximum production rate of 150 tons per hour and four fuel types (Goed Odi, #2 Fuel Odi, Propose; & Natural Gas)
ART TONICS AND HAZARDOUS AIR POLLTANTS (HAPS)
Point Source = HMA Plant; Parallel Drom Mix Dryer

Pollutant	EF Value (th/ton)	Calculated	Pollutant	EF Value	Calculated TPV			
ICI .	0.00021	0.10665375	Metals					
			Antimony	0.00000013	9 14175E-05			
Ven; PAILIE (P)			Arsenie	0.00000056				
Acctaldeliside	0.0013	0.6607375	Darison	0.0000058	0.002945675			
Acrolein	0.000026	0.01320475	Cadmium	0.00000041	0.000208229			
Всигене	0.00039	0.19807125	Chromian	0.0000055	0.002793313			
Filis Denzene	0.00024	0.12189	Cobalt	0.0000000026				
Formaldeloyde	0.0031	1 5744125	Copper	0.0000011	0.001574413			
Hexane	0.00092	0.467245	Hexaylant Chromnon	0.00000045	0.060228544			
sooctane(2,2,4-trimethylpentane)	0.00004	0.020315	Lead	6 00000062	0.000314883			
Methyl Ethyl Ketone	0.00002	0.0101575	Manganese	9 9900077	0.003910538			
Propienaldelissle	0.00013	0.06602375	Mercury	0.00000024	0.00012189			
Dunone	0.00016	0.08126	Nickel	0.00006.1	0.031996125			
Methylehloroform	0.000045	0.024378	Phosphorus	0.000028	0.0112205			
Tolarne	0.0029	1.4728375	Silver	0.00000048	0.00024378			
Nylene	0.0002	0.101575	Seleniam	0.00000033				
Lord Nov P. W. HAPs	0.0095	4.8245125	Thalloans	4.1E-09				
			Zing	0.000061	0.010980375	Lance of the same	EF Value	Calculated
KATTURE .						Pellutani	(lb/ion)	TPV
PARTICIPA	0.00017	0.08633875	2.3.7.8-TCDD	2.18-13	1.06654E-10	2.3.2.5-TCDF	9.7E-13	4 926391-10
I-Methylmaphthalene	0.00017	0.000711025					3 315-11	
Acenaphthene	0.0000022	0.00711025	Total TCDD	9.3E-13	4.72324E-10 1.57441E-10	Total TCDF 1.2.3.7.8-PcCDF		2.18386E-09
Accuaphthylene			1.7.3.7.8-PcCDD	3.1E-13				4.25615E-10
Ambracere	9 0000031		Total PeCDD	2.28-11	1.11733E-68	2,3,4,7,8-PcCDF		
Henze (a) anthracene	0.00000021	0.000166654	1,2,3,4,7,8-HsCDD	4.2E-13	2 13308E-10	Total PeCDF	8.4E-11	4.26615E-08
Henzo(a)pyrene	9 \$E-09		1,2,3,6,7.8-HxCDD	1.39E-12		1.2,3,4,7,8-H&CDF	5.4E-12	
Henze hithernanthene	0.0000001	5.078751:-05	1,2,3,7,8,9-HsCDD	9.8011-13		1.2.3.6.7.8-HxCDF	1.2E-12	6.0945[-10
Heszo(e)pyrene	0.09090011	5.58663E-05	Total HxCDD	1.206-11	6.0945E-09	2.3,4,6,7,8-H),CDF	1.915-12	9.649631-10
Benzo (g.h.) perdene	0.60000004		1,2,3,4,6,7,8-HpCDD	3.40E-11	1 72678E-05	1.2.3.7.8,9-H&CDF	8-4E-12	4 2661511-09
Benze(k)fluoranthene	0.000000041	2 982291:-05	Total HpCDD		3 60391E-06	Total HxCDF	1 31:-11	
Chrysene	0.00000018	9.14175E-05	Octa CDD	2.70E-09		1.2.3.4.6.7,8-HpCDF		5.58663E-09
Fluoranthene	0.00000041	0.000309894	Total PCDD	2.802-09	1.42205E+06	1.2.3.4.7.8.9-HpCDF		1.371268-09
Fluorene	0.000011	0.005586625				Total HpCDF		1.929931/-08
Indeno[1,2,3-ed)pyrene	0.0000000997	3.555131:-06				Octa CDF	4.8E-12	
Vaplishaleng	0.00065	0.33011875				Total PCDF	1.5E+16	
Perylene	8 8E-09	4.46/93E-66				Total PCDD PCDF	3 6E-09	1.52363E-06
Phenanthrene	0.000073					and the state of t		
Pytone	9 000000							
Total PAH HAPs	0.00068	0.44693						
Total HASs	0.01	5.07875						

NOTE: EF values are from AP-42 and are as a combination of "controlled" emissions as "fabric filter" and "uncontrolled". Due to four types of fact the "worst-case! FF was selected and used. Tables 11.1-8; 11.1-12. H-K CONTRACTORS, INC.
TETON PACILITY HOT MIX ASPHALT (HMA) PLANT
EXHISTION CALCULATIONS - PERMIT LIMITS - POTENTIAL TO EMIT (based on 4,063 hours per year, which is the current permit limit)
Based on maximum production rate of 150 mas per hour and currently permitted fact type of Propune only
Alti TOKICS AND HAZARDOUS AIR POLLUTANTS (HAPs)
Point Source ~ HMA Plant; Parallel Drum Mix Deyer

Pollutant	(lb/ton)	Calculated TPY	Pellstant	EF Value	Calculated			
10	ND		Meints	Hereton	-			
16.7	1512		Antimoty	9.00000018	9 14175E-05			
Sing P.411 (1.415)			Arsenie	0.00000056	0.00028441			
Acetaldehode	ND	#VALUE!	Barium	0.0000051	0.002945675			
Actolcin	ND	#VALUE!	Cadmium	9.09990041	0.002943072			
lenzene	0.00039	0.19807125	Chroniam.	0.0000043	0.002793313			
Ethylbearene	0.00024		Cobalt	0.000000076	1 \$204×E-05			
Formaldelivde	0.0031	1.5744125	Copper	0.0000031	0.001574413			
devane	0.00092	0.467245	Hexavlent Chromium	9.00000045	0.000228544			
sooctane(2,2,4-trimethylpentase)	0.00004		Lead	0.00000062	0.000314983			
Methyl Ethyl Ketone	ND		Manganese	D 6000077	0.000314933			
Propionaldehyde	ND	#VALUE!	Mercury	9.00000024	0.00012189			
Dataone	ND.		Nickel	0.000063	0.031996125			
Methyl chloroform	0 000018	9.024378	Phosphorus	0.000028	0.0142205			
Colucor	0.00015	0.07618125	Silver	0.00000048	0.00024328			
Cylene	0.0007	0.101575	Selemon	0.00000011	0.000177756			
Total Nov PAH HAPA	0.0051	2.5901525	Dialliam	4.1E-09	2.08229E-06			
tions and sales and the sales	0.58331	43391973	Ziac	0.000001	0.030980375		EF Value	Calculated
			/ Inc	0.000001	0.030360373	Pollutant	(lb/ton)	TPY
PARTIAPS			Distante			Farios	-	
Methylmaphthalene	0.000074	0.03758275	2.3.7.5-TCDD	NO	#VALUE!	2.3.7.8-TCDF	NO	#VALUE!
Acenaphibene	0.0000014	0.000711025	Tetal TCDD	ND	SVALUE	Total TCDF	ND	
Acenapinio Jene	0.0000086	0.004367725	1.2.3.7.8-PeCDD	NO	*VALUE!	1.2.3.7.8-PeCDF	ND	
Anthracene	0.00000022	0.000111733	Total PeCDD	NO	#VALUE!	2,3,4,7,8 PeCDF	ND	
lenzo(a)anthracene	0.00000021	0.000106654	1.2.3.4.7.8-HsCDD	NO	BVALUE	Total PcCDF	ND	
tenzo(a)pyrene	9.86-69	4.977181-06	1.2.3.6.7.8-HxCDD	ND	#VALUE!	1,2,3,4,7,8-HsCDF	ND	
Henzo(b)Harvanthene	0.0000001		1.2.3.7.8.9-HxCDD	ND	#VALUE!	1,2,3,6,7,8-H5CDF	ND.	
Henzo(e)pyrene	0.00000011	5 586631-05	Tetal HyCDD	ND	#VALUE!	2,3,4,6,7,8-Hs-CDF	ND.	
Benzo(g.h.i)perylene	0.00000001	0.000020315	1.2.3,4,6,7,8-HpCDD	ND	#VALUE?	1.2.3.7.8.9-H+CDF	ND	
leazo(k)flaoranthene	6.000000041	2.09229105	Tetal HpCDD	ND	#VALUE!	Total HyCDF	ND	
Chrysene	0.00000018	9 14175F-05	Octa CDD	ND	SVALUE	11.2.3.4.6.7.8-HpCDF	ND	
Fluoranthene	0.00000061	0.000309804	Total PCDD	ND	AVALUE	1,2,3,4,7,8,9-HpCDF	ND	
Tworene	0.0000038	0.001929925				Total HpCDF	ND	
adeno(1,2,3 cd/gyrene	0.6060000007	3.555138-06				Octa CDF	ND	
Vaphthalenc	0.00009	0.04570875				Total PCDP	ND	
Perylene	8.8E-09	4 4693E-06				Total PCDD PCDE	ND	
henanthrene	0.0000076	0.00385935				The state of the s	(4)2	2.1.11.01.
yrene	0.0000054	0.002742525						
Total PAH HAPs	0.00019	0.09049625					-	
field HAP	0.0053	2.6917375					-	

NOTE: EF values are from AP-42 and are as a combination of "controlled" emissions as "fabric filter" and "uncontrolled" Tables 11.1-8; 11.1-10; &(11.1-12)
NOTE: NO Pand and *VALUE = no calculation

H.N. CONTRACTORS, INC.
TATON FACILITY HOT MIN ASPHALT (HIMA) FLANT
FIFE DATA VALUES DIFFERENCE OF ACTIVAL FROPOSED COMPARED TO CURRENT PERMIT LIMITS
For use in Endmine Limit (E.I.) competing for IBEQ listed Toxic, Air Pollments (TAP)
AIR TONICS AND HAZARHOODS AIR POLLITAINATS (JAP)
Point Source - HMA Plant, Parallel Drum May Deyer at 4,863 lively.

Pollutant	IDEQ EL (Behr)	Difference Helter	Except EL(V/N)	Polistant	IDEQ EL (Hebr)	Difference.	Except EL(Y/N)	1			
IKTI	L.L. Quentry	PVALUE:	E143/20	16/nds	E.L. Diener	Helity	EL(Y/S)	-			
Ut 1		BYALUE:			-			-			
		_		Automa	11623	0.003	_	-			
No. PARKEDS				Arren	1.311-06	0.501(+60		-			
Ace to labelity-fee	3-01-03			Dacren	9.033	6.00		-			
Acrobein	1.21-03	WALCE!		Cadeniare	3.78-08	0.0000000					
Nen trea	4 01 44			Chremann	31033	0.060		_			
HAy Decrees	291	9.00		Colvelt	0.0023	0.000					
Control de la julio	3.13544			Coppet	11,014	0.000					
lexaur	12.0	0.60		Hexadent Chromism	3.06-02	G COST (4.6)					
hospitano(2,2,4 introductly hydronians)		0.00		Land		0.09					
Methyl Ethyl Kehine	34.3			Manganere	10,067	0.100					
Programal deligade	2.875.40	PVALUE		Mercury	0.003	0.000					
Norma	2.73,40	EVALUE		Sidel	2.76m5	0.000					
Methyl chloraform	127.4	9.00		Distribunce	0.007	0.000					
Lulisers	25.0	0.69		Select	11.007	0.000					
Nylene	29.6	9.00		Scleniam		0.000					
Freed New PARCHAPS		1.10		Thatlinger	.007	.0.000					
			-	Ziie	0.647	0.000		Pollutant	EL (Echr)	Difference	Exceed EL(V/N)
Pathos				District				Patricia			
2-Methylangratiologic		0.02		2,3,7,6,700164		#VALUE:		2/A-TA-TUTIE		AVALUE:	
Sycnephthene		# 00		1(4)11(3)13		MVALLER		Total TCDF		AVALUE:	
New traphthy fewer		0.00		7,2,3,7,4-Par DO		WVALUE		1.7.3.7.8 Pecfull		#VALUE	
Authorities		0.00		Total Partiti		#VALUE:		2,2,4,7,9,050 (10)		#VALUE	
Sen codatant houseway		600		1,2,3,4,1,8,40(TD)		WVALUE.		Total PsCTH	-	#VALUE:	
Herri-Lugarene	2.08-09	THORESON.		1,2,3,6,7,8406300		#VALUE		1.2.3,4.7,4.(14(3))		#VALUE	
Server (Sidian southware)		41130		1,7,3,7,9,94(4) 3341		#VA1171*		1,2,5,6,7,8,116(7)9		4VALUE:	
Owner de terrateme		0.00		Total HacTiti		#VALUE		2.7.4.6.7.8-H+CDF		#VALUE:	
Octordada aperateire		0.60		1,2,3,4,6,7,4,146(101)		#VALUE		1.2.3.2.6.9 Hof DF		#VALUE:	
Dear-Oddssmathres		1160		Total (Section		#N/ALL/3/2		Total HoCDE		#VALUE*	
Chrysens		11.044		CKO CDO	1	#VALUE		1.2.3.4.6.7.8.01sCDF		4VALUE:	
Lhaventhone		0.0		T-ral (5.700)	-	#NALLTE		1,13,4,7,8,9-11/01/		10/ALCE	
horary		111.00				-		Livial LipCitie	-	#VALUE	
Indexes 1, 2, 1 solgranese		0.00						Cata CDE		#VALUE	
Naphthalene	3 33							Total PCTH	_	#VALUE	_
Pyrylens	- 11	P.00						Total PCDG PCDF		#VALUE	-
Chemondistanie		11 (4)					-	TOWNER INSTITUTE		#VALUE	-
Children		0.00					-		-	-	-
Dest PARTITION		0.17							_	-	
Total Heth		1.19			-				-		-
1.900 (1.07)		1.13								_	1

NOTE 1000231, values taken from 10APA 5001-01. Tables as Sections 285 and 250 and represent the "Sciencing Limitation and Develops to difference.

NOTE: WARLET induces no raficulation and therefore to difference.

H-	K	Cont	raci	tors.	Inc

APPENDIX B

AQ MODELING (SCREEN3) PARAMETERS AND RESULTS

Date: 3/22/2007

SCREEN3 Modeling Raw Data Inputs

Client:

H-K Contractors, Inc.

Source:

Teton Facility HMA Plant (1959 Barber Green; Drum Mix; Parallel Flow)

Type:

Dryer Drum

Compound (Air Pollutant): All, set at 1.0 pound per hour (lb/hr)

1. Measured or estimated emission rate in either pounds per hour (lbs/hr) or grams per second (g/s):

1.0 lb/hr or 0.126 g/s

2. Measurements of the exit stack height for the Source, above the ground level in either feet (ft) or meters (m):

25 ft or 7.62 m

3. Measurements of the <u>inside diameter</u> of the stack for the Source in either ft or m:

3.33 ft or 1.02 m

4. Measured or estimated rate of <u>stack exit velocity</u> in either feet per second (ft/s) or meters per second (m/s) of the stack for the Source:

84.2 ft/s or 25.7 m/s

5. Measured or estimated stack gas temperature in either °F or °C of the stack for the Source:

127 °F or 52.78°F or 325.93°K

6. Notification of any terrain in the area that is above the exit of the stack for the Source:

None

7. Notification of the facilities setting as either <u>Urban or Rural</u> of the stack for the Source:

Rural

 Measurements of the <u>buildings height</u> in either ft or m, if there are any buildings associated with the stack for the Source:

N/A

9. Measurements of the buildings minimum and maximum dimensions in either ft or m:

N/A

10. Location of the facility, and/or nearest city:

110 North 2300 East, Teton, ID

11. Measurements of distance from the stack for the Source to the property boundary in ft or m:

Unknown

03/30/07 13:52:54

```
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
```

H-K Contractors Teton Facility HMA Plant Dryer Drum Dispersion Factor

```
SIMPLE TERRAIN INPUTS:
  SOURCE TYPE
  EMISSION RATE (G/S)
                                .126000
  STACK HEIGHT (M)
                                7.6200
  STK INSIDE DIAM (M)
                        =
                                1.0200
  STK EXIT VELOCITY (M/S) =
                               25.7000
  STK GAS EXIT TEMP (K) =
                             325.9300
  AMBIENT AIR TEMP (K)
                       ===
                              293.0000
  RECEPTOR HEIGHT (M)
                        =
                               1.0000
  URBAN/RURAL OPTION
                        =
                                RURAL
  BUILDING HEIGHT (M)
                        =
  MIN HORIZ BLDG DIM (M) =
                                 .0000
  MAX HORIZ BLDG DIM (M) =
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED. THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 6.623 M**4/S**3; MOM. FLUX = 154.436 M**4/S**2.

*** FULL METEOROLOGY ***

*********** *** SCREEN AUTOMATED DISTANCES *** ***********

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
50.	.2125	3	10.0	10.0	3200.0	16.47	6.91	4.50	NO
100.	4.410	3	10.0	10.0	3200.0	16.47	12.65	7.75	NO
200.	6.305	3	8.0	8.0	2560.0	18.68	23.83	14.38	NO
300.	5.886	4	10.0	10.0	3200.0	16.47	22.75	12.35	NO
400.	5.302	4	8.0	8.0	2560.0	18.68	29.62	15.59	NO
500.	4.765	4	5.0	5.0	1600.0	25.31	36.50	18.98	NO
600.	4.362	4	5.0	5.0	1600.0	25.31	43.02	21.81	NO
700.	3.978	4	4.0	4.0	1280.0	29.73	49.59	24.85	NO
800.	3.651	4	3.5	3.5	1120.0	32.89	56.04	27.74	NO
900.	3.369	4	3.5	3.5	1120.0	32.89	62.30	30.34	NO
1000.	3.141	4	3.0	3.0	960.0	37.10	68.65	33.18	NO
MAXIMUM	1-HR CONCENT	RATION	AT OR	BEYOND	50. M				
157.	6.600	3	10.0	10.0	3200.0	16.47	19.17	11.58	NO

MEANS NO CALC MADE (CONC = 0.0) DWASH=NO MEANS NO BUILDING DOWNWASH USED DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED

DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB *************

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	6.600	157.	